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IS 5141 (1969): Wooden cones for winding yarn [TXD 14: Machinery for Fabric Manufacture]

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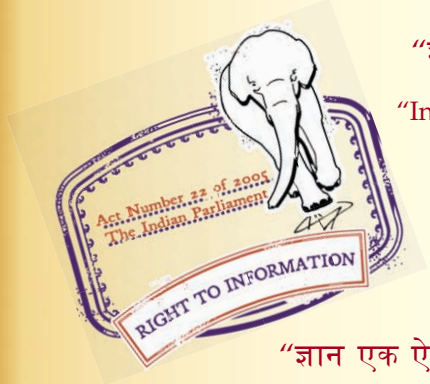

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Bhartṛhari—Nītiśatakam
"Knowledge is such a treasure which cannot be stolen"

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IS : 5141 - 1969

(Reaffirmed - 2012)

Indian Standard

SPECIFICATION FOR WOODEN CONES FOR WINDING YARN

(Second Reprint March 1997)

(Incorporating Amendment No. 1)

UDC 677.053 3

BUREAU OF INDIAN STANDARDS

MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG

NEW DELHI 110002

Gr 2

August 1969

Indian Standard

SPECIFICATION FOR WOODEN CONES FOR WINDING YARN

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Indian Standard

SPECIFICATION FOR WOODEN CONES FOR WINDING YARN

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 30 June 1969, after the draft finalized by the Textile Mill Accessories (Other Than Jute) Sectional Committee had been approved by the Textile Division Council.

0.2 In formulating this standard, due weightage has been given to the international co-ordination among the standards and practices prevailing in the field in this country. Considerable assistance has been derived from the following publications:

ISO/R 325-1963 (E) Wood cones for cross winding (half angle of the cone 4° 20′). International Organization for Standardization.

ISO/R 326-1963 (E) Wood cones for cross winding (nominal half angle of the cone 5° 57′). International Organization for Standardization.

ISO/R 327-1963 (E) Wood cones for cross winding (half angle of the cone 3° 30′). International Organization for Standardization.

B.S. 2547 : 1960 Cones and tubes for winding textile yarns. British Standards Institution.

0.3 This standard contains clauses **3.2.1**, **4.3** and **8.3** and Note under Table 1 which call for agreement between the buyer and the seller for permitting him to use his option for selection to suit his requirements.

0.4 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test, shall be rounded off in accordance with IS : 2-1960*. The number of significant places retained in the rounded off value shall be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard prescribes requirements for and method of sampling of wooden cones for winding yarn (cross-wound).

*Rules for rounding off numerical values (*revised*).

1.2 This standard covers cones having the following angles:

a) 3° 30′,

b) 4° 20′, and

c) 5° 57′.

2. TERMINOLOGY

2.1 For the purpose of this standard, the *angle of cone* shall mean the angle contained between the side and the axis, that is, half the total angle.

3. MANUFACTURE

3.1 Material — The cones should be manufactured from well-seasoned timber.

NOTE 1 — A list of recommended species of timber is given in Appendix A for information of the manufacturer.

NOTE 2 — A recommended code of manufacturing blanks for cones is also given in Appendix A.

3.2 Finish — The cones shall have a smooth finish.

3.2.1 If prescribed by the buyer, grooves shall be provided at the base to accommodate tail ends of yarn.

NOTE — Such grooves are provided only if the cones are to be used in magazine creel.

3.3 Freedom from Defects — The cones should be free from bark pockets, checks or cracks, gum ducts, honeycombing, knots, splits and other defects which are likely to affect the life or usefulness of the cones. For the description of various types of defects, *see* IS : 707-1968*.

4. REQUIREMENTS

4.1 Dimensions — The cones depending upon their angle shall conform to the requirements of Table 1 when read with Fig. 1.

4.2 Concentricity — Cones shall be concentric. The eccentricity of cones shall, however, not exceed the values given below:

Base — 0·25 mm

Top — 0·75 mm

4.3 Weight — The average weight of a cone in a lot shall be as agreed to between the buyer and the seller. A tolerance of ±4 percent on the contracted weight shall, however, be permissible.

*Glossary of terms applicable to timber, plywood and joinery (*first revision*).

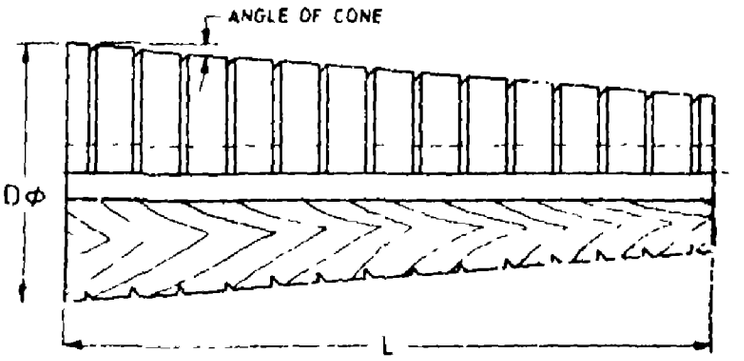

FIG. 1 TYPICAL WOODEN CONE

TABLE 1 DIMENSIONS OF WOODEN CONES

(*Clause* 4.1 and *Fig.* 1)

ANGLE OF CONE	OVERALL LENGTH	EXTERNAL DIA AT BASE	EXTERNAL DIA AT TOP*
	L	*D* Φ	
(1)	(2)	(3)	(4)
	mm	mm	mm
3° 30′	152	60	41
	181	70	48
4° 20′	145	55	33
	165	58	33
	171	59	33
5° 57′	145	63	33
	165	67	33
	171	69	33
Tolerance	±2	±1	±1

NOTE — The dimensions and shape of grooves and internal dimensions of bore shall be as agreed to between the buyer and the seller.

*For information only.

4.3.1 The average weight of the cone shall be equal to the oven-dry weight (at 105° to 110°C) of cones plus 10 percent for moisture content.

5. DESIGNATION

5.1 The cones shall be designated by the overall length × external base diameter and angle of cone.

Example:

152 × 60, 3° 30′

6. MARKING

6.1 Each cone shall be marked at a suitable place with the angle of cone and brand or trade-mark of the manufacturer.

6.2 BIS Certification Marking

The product may also be marked with Standard Mark.

6.2.1 The use of the Standard Mark is governed by the provisions of Bureau of Indian Standards Act, 1986 and the Rules and Regulations made thereunder. The details of conditions under which the licence for the use of Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

7. PACKING

7.1 Cones shall be packed in wooden cases strong enough to withstand normal hazards of storage and transport..

7.2 Each pack or case of cones shall bear the following information:

a) Manufacturer's name, initials or trade-mark, if any;

b) Number of cones packed;

c) Designation of cones (*see* **5.1**); and

d) Year of manufacture.

8. SAMPLING

8.1 Lot — The quantity of cones of same designation and manufactured from the same species of timber delivered to a buyer against a despatch note shall constitute a lot.

8.2 The conformity of the lot to the requirements of this specification shall be determined on the basis of the tests carried out on the samples selected from it.

8.3 Unless otherwise agreed to between the buyer and the seller the number of cones to be selected at random from a lot shall be according to Table 2.

8.4 The cones selected according to **8.3** shall be examined for finish, freedom from defects, dimensions, concentricity and weight.

8.5 Criteria for Conformity — The lot shall be declared conforming to the requirements of the specification if the number of cones not satisfying the requirements for any one or more of the characteristics mentioned in **8.4**, does not exceed the corresponding number given in col 3 of Table 2.

TABLE 2 SAMPLE SIZE AND PERMISSIBLE NUMBER OF NON-CONFORMING CONES

(*Clauses* 8 3 *and* 8.5)

No. of Cones in the Lot	No. of Cones to be Selected	Permissible No. of Non-conforming Cones
(1)	(2)	(3)
Up to 100	13	1
101 ,, 300	20	2
301 ,, 500	32	3
501 ,, 1 000	50	5
1 001 and above	80	7

APPENDIX A

(*Notes* 1 and 2 under *Clause* 3.1)

RECOMMENDED SPECIES OF TIMBER AND CODE OF MANUFACTURE FOR BLANKS FOR CONES

A-1. LIST OF SPECIES OF TIMBER

Trade Name	*Botanical Name*
Amari	*Amoora* Sp.
Bola	*Morus laevigata* Wall.
Champ	*Michelia champaca* Linn.
Chikrassy	*Chuckrassia tabularis* Adr. Juss.
Haldu	*Adina cordifolia* Hook. f.
Hathipaila	*Pterospermum acerifolium* Willd.
Kaim (Kalam)	*Mitragyna parvifolia* (Roxb.) Korth.
Kanju	*Holoptelea integrifolia* Planch.
Kurchi (Kurdis)	*Holarrhena antidysentrica* Wall.
White Cedar	*Dysoxylum malabaricum* Bedd.

A-2. RECOMMENDED CODE OF MANUFACTURE FOR BLANKS FOR CONES

A-2.1 It is recommended that the timber may be converted into straight-grained blanks of suitable size. However, a slope of grain not exceeding 1 in 16 should be permitted in the converted blanks. The blanks should then be seasoned under proper conditions of drying to the required moisture content (*see also* IS : 1141-1958*). The moisture content of well-seasoned blanks should not be more than 12 nor less than 8 percent at the time of manufacture of cones.

*Code of practice for seasoning of timber (*tentative*).

BUREAU OF INDIAN STANDARDS

Headquarters:
Manak Bhavan 9 Bahadur Shah Zafar Marg NEW DELHI 110002
Telephones 323 0131 323 3375, 323 9402
Fax 91 11 3234062, 91 11 3239399 91 11 3239382

Telegrams Manaksanstha
(Common to all Offices)

Central Laboratory:	Telephone
Plot No 20/9, Site IV, Sahibabad Industrial Area, SAHIBABAD 201010	8-77 00 32
Regional Offices:	
Central Manak Bhavan, 9 Bahadur Shah Zafar Marg, NEW DELHI 110002	323 76 17
*Eastern 1/14 CIT Scheme VII M, V I P Road, Maniktola, CALCUTTA 700054	337 86 62
Northern SCO 335-336, Sector 34-A, CHANDIGARH 160022	60 38 43
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Branch Offices:	
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NIT Building, Second Floor, Gokulpat Market, NAGPUR 440010	52 51 71
Institution of Engineers (India) Building, 1332 Shivaji Nagar, PUNE 411005	32 36 35

*Sales Office is at 5 Chowringhee Approach, P O Princep Street, CALCUTTA 700072 — 27 10 85

†Sales Office is at Novelty Chambers, Grant Road, MUMBAI 400007 — 309 65 28

‡Sales Office is at 'F' Block, Unity Building, Narashimaraja Square, BANGALORE 560002 — 222 39 71

Printed at New India Printing Press, Khurja, India